

**SOUTHEASTERN LOUISIANA UNIVERSITY**  
**DEPARTMENT OF MATHEMATICS**  
**MATH 162 SYLLABUS**

**COURSE TITLE:** Plane Trigonometry

**CREDIT:** 3 semester hours

**TEXT:** *Trigonometry*, 9<sup>th</sup> Edition by Lial, Hornsby, and Schneider

**PUBLISHER:** Pearson Education

**PREREQUISITE:** Math 155 or 161.

**CATALOGUE DESCRIPTION:** The study of trigonometric functions. Topics include the topics of sine and cosine, the trigonometric functions and their graphs, inverse trigonometric functions, trigonometric identities and equations, complex numbers, graphs of parametric equations, and graphs in polar coordinates. Trigonometry and trigonometric functions will be used to model and solve real world applications.

**SPECIFIC COURSE CONTENT – the section numbers in the textbook covering these topics are given after the topic:**

- Angle measure (1.1)
- Definitions of six trigonometric functions (1.3)
- Right triangles (2.1)
- Trigonometric functions of acute angles (2.1)
- Trigonometric functions of general angles (2.2)
- Finding trigonometric functions using a calculator (2.3)
- Right triangle applications (2.4, 2.5)
- Radian Measure of an angle (3.1)
- Arc Length and area of a circular sector (3.2)
- Unit circle (3.3)
- Graphs of trigonometric functions (4.1, 4.2, 4.3)
- Phase shift (4.2)
- Inverse trigonometric functions (6.1)
- Identities (1.4, 5.1, 5.2)
- Sum and difference formulas (5.3, 5.4)
- Double and half-angle formulas (5.5, 5.6)
- Trigonometric equations (6.2, 6.3)
- Law of Sines (7.1)
- Law of Cosines (7.3)
- Areas of Triangles (7.1, 7.3)
- Vectors (7.4)
- Polar Coordinates (8.5)
- Polar equations and graphs (8.5)

**NOTE:** All sections of Math 162 will have a minimum of 3 regular examinations and a final examination, in addition to quizzes and/or homework.

**EMAIL REQUIREMENT:** All correspondence will be made through students' Southeastern email accounts.

**DISABILITY ACCESS STATEMENT:** If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Room 203, Student Union. No accommodations will be granted without documentation from the Office of Disability Services.

**ACADEMIC INTEGRITY:** Students are expected to maintain the highest standards of academic integrity. Behavior that violates these standards is not acceptable. Examples include the use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work.